



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,868	10/12/2006	Robert Desbrandes		5857

7590 09/13/2011
E-Quantic Communications SARL a capital variable
Allee des Cheriniers
Givarlais, F-03190
FRANCE

EXAMINER

MONDT, JOHANNES P

ART UNIT	PAPER NUMBER
----------	--------------

3663

MAIL DATE	DELIVERY MODE
-----------	---------------

09/13/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,868

Applicant(s)

DESBRANDES ET AL.

Examiner

JOHANNES P. MONDT

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 47-93 is/are pending in the application.
- 5a) Of the above claim(s) 47-68 and 86-93 is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 69-85 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☒ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-943)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Amendment

1. Amendment filed April 17, 2011, forms the basis for this Office Action. Comments on Remarks submitted with the Amendment are included below under "Response to Arguments".

The amendment filed 4/17/11 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. MPEP 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The portion starting on page 9, line 14 (The following methods, devices and use....") and ending on page 11, line 14 ("...in particular emergency signals").

Applicant is required to cancel the new matter in the reply to this Office Action.

Change of Power of Attorney Request

2. A power of attorney change seems to have been requested, but by only a single one of the two inventors. Furthermore, no attorney of record is found in the file. Applicant s remain to be viewed as pro-se applicants.

Response to Arguments

3. Applicant's arguments filed 4/17/11 have been fully considered but they are not persuasive.

In an apparent response to a finding of lack of enablement and lack of utility, applicant states that an article was available with the description of the measurements (N.B.: see response to "points" 4 and 5, pages 1-2 and 3-4 of Remarks: by the way:

Art Unit: 3663

“points” here is interpreted to mean “section” as appearing in the prior Office Action).

The article is not well-defined, although a copy, also as such not well-defined, appears included in the instant Remarks as appendix (B,? C?). In any case, no peer-reviewed publication has been identified as such by applicant. Was the "article" submitted to a scientific journal in the appropriate field of scientific research? Has said article been reviewed by referees and accepted, on the basis of the outcome of said review, by the journal, or, in the event of disagreement among referees by an adjudicator's decision? No indication to the affirmative on any of these questions is evident from the Remarks/"Declaration". Furthermore, but as a more procedural point, any such "Declaration" should be clearly identified to have been submitted under 37 C.F.R. 1.132. Even arguendo, the topic of the patent constitutes very basic physics research while lacking sufficient credibility. Therefore, it is only reasonable to require the experimental data to be evaluated, experimental data, and no peer review is available, whether before or after publication. Regarding incorporation into the specification of this material, this is not allowed. No new matter can possibly be allowed in the specification: only the specification-as-originally filed is acceptable as the written description of the invention, except for minor informalities. See MPEP 132(a). Even the currently filed specification has new matter: see section 1 above.

Furthermore, applicant admits that “no one has undertaken the replication of the invention yet” (page 4). Applicant thus admits to desire a patent based on unverified own measurements of an “extraordinary law of nature” (page 4) or phenomenon so far unexplored by anyone else. In response examiner submits that extraordinary results

Art Unit: 3663

require extraordinary verification. No verification at all is available at this time, by admission of applicant.

Even arguendo, the discussion on pages 4-13 including discussion of the work by Cauchois does not explain how applicant is able to know *which* excited constituents within a sample are entangled. That was the greatest difficulty of the historical experiments on quantum entanglement.

The discussion of points 6-12, said points all being caused by and referring to the objection to the specification as set forth in sections 4 and 5, do not make up for the lack of evaluated, experimental data, complete with error analysis and extensively peer-reviewed. In response to comments under "point 10" examiner reiterates the paragraph just preceding the instant one in the instant office action.

Examiner had concluded that evaluated, experimental data, complete with extensive peer review and error analysis, would have been required to lend sufficient credibility to the invention so as to withdraw the rejections for lack of utility and lack of enablement. See page 4, line 1 and line 19. No such evaluated, experimental data are available.

Based on the response to sections 4 and 5 of the prior Office Action examiner sees no reason at all to withdraw either section 4 or section 5.

No amendment to the claims was filed.

In view of the above the objections and rejections of the prior office Action stand, and are reproduced here without any intended change.

Specification

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The Specification is objected to for failing to support the claimed invention by either a credible asserted utility or by a well-established utility, while the method as claimed is so insufficiently developed and supported in the specification as to be wholly inoperative. Applicant is referred to a recent review on quantum entanglement around the time of his invention (Genovese, M., Physics Reports 413 319-396 (2005)) in which the history of research on the much simpler case of photon entanglement together with all the difficulties of resolution and timing in painstaking experimental work over decades is reviewed. See, for instance, the concluding statement at the end of section 3.3 concerning resolution difficulties, which are discussed extensive elsewhere in Genovese. In contrast, applicant hardly presents any experimental data and presents no error analysis in connection with his experimental data. Applicant fully and casually ignores the huge problem of resolution in identifying the detector signals relevant for the experiment, and of timing. The time-honored way of proceeding is through basic research, with scrutinized and peer-reviewed experimental data, complete with error analysis. This is what Aspect and co-workers, and Horne-Zeilinger, and Shimoni-Holt

Art Unit: 3663

etc., did (see, e.g., the discussion of references 34 and 83 in Genovese). In other words, evaluated, experimental data lending credibility to applicant's claims. In the absence thereof, the inventive method is considered to lack a credible utility. No doubt the utility is not well established either.

5. The Specification is further objected to for failing to support the invention as claimed by an enabling disclosure. One of skill in the art would not know how to use the method for its stated and asserted purpose, because of the above-described difficulties with identification of individual measurement objects and timing. In this regard it is further noted that regarding the breadth of the claims it is noted that the "preamble" asserts the method to be a method of controlling a remote deexcitation of an excitation by gamma rays, for which however the specific isomeric nuclei would have to be identified by specific and extremely skillful measurement techniques including timing. The specification does not explain how this is carried out. Regarding the nature of the invention and the state of the prior art, applicants' assertion in terms of the claim language would provide a true milestone in experimental physics if reduced to practice, yet the specification does not even provide the amount and quality of quantitative results expected in a basic research article. The level of ordinary skill is wholly inadequate to carry out the experimental work needed to use the invention for its stated purpose, because no one skill in the art has thus far succeeded while the specification does not provide specific directions and evaluated, experimental data to guide one skilled in the art. The level of predictability in the art is negligible, because the method as claimed would be a pioneering effort in basic research not supported by directions

Art Unit: 3663

from applicant in terms of adequate working examples and evaluated, experimental data. Thus basic experimental research, and hence undue experimentation would at best be required to practice the invention. In light of the foregoing considerations examiner concludes that the invention by applicant is not enabled by the disclosure (MPEP 2164.01(a)).

Claim Rejections - 35 USC § 101 - §112

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. ***Claims 69-85*** are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a credible asserted utility or a well established utility.

The reasons for this rejection are the same as those set forth in the objection to the specification in section 4 above.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. ***Claims 69-85*** are also rejected under 35 U.S.C. 112, first paragraph.

Specifically, since the claimed invention is not supported by either a credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. **Claims 69-85** are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The reason for this rejection is the same as the reason for the objection to the specification on account of the method being inoperative as set forth above in section 4.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. **Claims 69-85** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The reasons for this rejection are the same as the reasons for the objection to the specification as set forth above in section 5.
10. **Claims 69-85** are additionally rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the limitation that the at least one excited isomeric nucleus has “at least one metastable state” requires enablement both for more than one

metastable state and for the case of a single metastable state. However, examiner takes official notice for the fact that ^{115}In has more than a single metastable state.

Therefore, the claimed invention is not enabled over its scope.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 69-85** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the claimed invention are vague and ill-defined due to lack of written support by an enabling disclosure as set forth above (see section 9 above), rendering the claims indefinite, because what lacks disclosure is indefinite.

12. **Claims 69-85** are additionally rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the claimed invention are vague and ill-defined because of the lack of enablement as explained above in section 10.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 3663

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES P. MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHANNES P MONDT/
Primary Examiner, Art Unit 3663